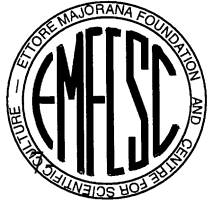


1963–2023

60<sup>th</sup> ANNIVERSARY OF ACTIVITIES



# SUMMARY OF THE 2023 COURSES — ERICE

All Courses are sponsored by the World Federation of Scientists (WFS), the Sicilian Regional Government (ERS), the Italian Ministry of Education, University and Scientific Research and the Galileo Galilei Foundation (GGF). Some of the Courses are under the sponsorship of the Italian Ministry of Foreign Affairs, the Italian Ministry of Health, the North Atlantic Treaty Organization (NATO), the American National Science Foundation (NSF), the Italian National Research Council (CNR), the Weizmann Institute of Science, the European Physical Society (EPS), the Italian National Institute for Nuclear Physics (INFN), the Enrico Fermi Historical Museum of Physics and Study and Research Centre, the World Wildlife Fund (WWF), the Commission of the European Communities (CEC), some of the main Italian and foreign Universities and Research Centres, and the World Laboratory

- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D’ALESSANDRO»  
Directors: G.M. FARA – G. GIAMMANCO – C. SIGNORELLI – M. SZKLO – F. VITALE  
59th Course: *Hospitals and healthcare infrastructures of the future. Planning, designing and managing the facilities for the new global healthcare: Bridging the gap between designers and Public Health professionals*  
Directors: S. CAPOLONGO – A. CASUCCIO – D. D’ALESSANDRO – M. FERRANTE  
15 – 18 March 2023
- INTERNATIONAL SCHOOL OF QUANTUM ELECTRONICS  
Directors: A.N. CHESTER – D.S. WIERSMA  
66th Course: *The frontiers of attosecond and ultrafast X-ray science*  
Directors: L. DI MAURO – M. NISOLI  
26 – 31 March 2023
- INTERNATIONAL SCHOOL OF CARDIAC SURGERY  
Directors: G. GEROSA – U.F. TESLER  
9th Course: *From minimal invasive to microinvasive cardiac surgery*  
Directors: G. GEROSA – M. PILATO  
2 – 5 April 2023
- INTERNATIONAL CONFERENCE ON MACHINE LEARNING FOR HEP  
Directors: E. KULIKOVA – V. VAGNONI  
11 – 18 April 2023
- INTERNATIONAL SCHOOL OF MEDICAL SCIENCES AND INTERNATIONAL SCHOOL OF CARDIOLOGY  
Directors: A. ZICHICHI – I. CARRECA and A. BRANZI – F. FEDELE – S. NOVO  
Joint Workshop: *Meet the experts “Advances in diagnosis and therapy of cancer in adult and elderly people” focus on: Breast cancer (and not only)*  
Directors: A.R. GALASSI – G. NOVO – V. POLIZZI  
18 April 2023
- INTERNATIONAL SCHOOL OF CARDIOLOGY  
Directors: A. BRANZI – F. FEDELE – S. NOVO  
23rd Workshop: *Advances in cardiovascular diseases and therapy*  
Directors: A.R. GALASSI – G. NOVO – V. POLIZZI  
18 – 22 April 2023
- INTERNATIONAL SCHOOL ON TREASURES OF ART AND SCIENCE  
Director: L. ZICHICHI  
13th Seminar: *Eat healthy Italy*  
Director: L. ZICHICHI  
26 – 29 April 2023

- INTERNATIONAL SCHOOL OF NEUTRON SCIENCE AND INSTRUMENTATION  
Directors: C. ANDREANI – R.G.M. CACIUFFO – R. MCGREEVY  
7th Workshop: *Science diplomacy*  
Directors: R.G.M. CACIUFFO – G. OTTAVIANI – A. ZICHICHI  
2 – 7 May 2023
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
Directors: P. PALANZA – S. PARMIGIANI  
50th Course: *Ethology: Past, present and future*  
Directors: C. AGRILLO – P. PALANZA – S. PARMIGIANI  
3 – 6 May 2023
- INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA  
Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO  
3rd Workshop: *Waveguide Quantum Electrodynamics (WQED23)*  
Directors: H. BARANGER – D. CHANG – F. CICCARELLO – P. RABL  
8 – 13 May 2023
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
Directors: P. PALANZA – S. PARMIGIANI  
51st Course: *Play and the evolution of creative societies*  
Directors: G. BÜRGHARDT – E. PALAGI – S. PELLIS – J. SCHANK  
14 – 18 May 2023
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS  
Directors: P. HÄNGGI – F. MARCHESONI  
23rd Course: *Frontiers in water biophysics*  
Directors: A. CESARO – L. COMEZ – G. FRANZESE  
19 – 24 May 2023
- INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»  
Directors: F. GIANNESSE – now G. BUTTAZZO – M. THÉRA  
75th Course: *Meeting on nonlinear evolution PDEs, fluid dynamics and transport equations*  
Directors: F. ANCONA – L. BERSELLI – S. BIANCHINI – D. DONATELLI – P. SECCHI  
25 – 31 May 2023
- INTERNATIONAL SCHOOL OF CRYSTALLOGRAPHY  
Director: T.L. BLUNDELL  
58th Course: *Structural drug design 2023: Biology, chemistry, and computers*  
Directors: C. DEAN – G. SCAPIN – F. VON DELFT  
2 – 10 June 2023
- INTERNATIONAL SCHOOL OF PRECISION MEDICINE AND LABORATORY  
Directors: M. CIACCIO – F. SALVATORE  
1st Course: *Clinical laboratory medicine in the era of precision medicine*  
Directors: M. CIACCIO – M. PLEBANI – F. SALVATORE  
11 – 13 June 2023
- INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS  
Directors: A. ZICHICHI – A. ZOCCOLI  
59th Course: *Searching the unexpected: Energy, luminosity, precision, small signals*  
Directors: A. BETTINI – A. MASIERO  
14 – 23 June 2023
- INTERNATIONAL SCHOOL OF SOLID STATE PHYSICS  
Director: G. BENEDEK  
83rd Course: *Infrared and Terahertz quantum*  
Directors: S. DHILLON – O. MITROFANOV – A. TREDICUCCI – M.S. VITIELLO  
25 June – 1 July 2023
- INTERNATIONAL SCHOOL OF MATERIALS FOR SUSTAINABLE DEVELOPMENT AND ENERGY  
Director: A. TERRASI  
3rd Course: *Materials for renewable energy and sustainability*  
Directors: D. CAHEN – D. GINLEY – R. O'HAYRE – A. SLAUOI – A. TERRASI – A. WEIDENKAFF  
2 – 9 July 2023

- INTERNATIONAL SCHOOL OF BIOLOGICAL MAGNETIC RESONANCE  
Director: J.D. PUGLISI  
19th Course: *Frontiers in biophysics*  
Directors: J.D. PUGLISI – E. VIANI PUGLISI  
10 – 17 July 2023
- INTERNATIONAL SCHOOL OF ATOMIC AND MOLECULAR SPECTROSCOPY  
Director: B. DI BARTOLO  
37th Workshop: *Advances and future directions in luminescent materials and devices*  
Director: M. CESARIA  
10 – 18 July 2023
- INTERNATIONAL SCHOOL OF NANOMEDICINE  
Directors: M. FERRARI – M. MASSERINI  
6th Course: *The glycobiology of cell metabolic processes at the nanoscale in human pathology*  
Directors: M. AURELI – O.K. GREINER-TOLLERSRUD  
19 – 24 July 2023
- INTERNATIONAL SCHOOL ON TREASURES OF ART AND SCIENCE  
Director: L. ZICHICHI  
14th Seminar  
Director: M. TOSCANO  
24 – 27 July 2023
- INTERNATIONAL SCHOOL OF PARTICLE ACCELERATORS «KJELL JOHNSEN, GUSTAV VOSS AND EDMUND WILSON»  
Director: T.M. TAYLOR  
4th Course: *Novel acceleration schemes and enabling technologies*  
Directors: R. ASSMANN – L. ROSSI – F. TECKER  
27 July – 2 August 2023
- INTERNATIONAL SCHOOL OF SOLID STATE PHYSICS  
Director: G. BENEDEK  
84th Workshop: *Karl-Alex Müller Symposium*  
Directors: A. BIANCONI – A. BUSSMANN HOLDER – H. KELLER  
3 – 9 August 2023
- INTERNATIONAL SCHOOL OF MUSICAL SCIENCES  
Director: R. GIULIANI  
4th Course: *Omaggio a Sergej Rachmaninov (1873-1943)*  
10 – 18 August 2023
- INTERNATIONAL SEMINARS ON PLANETARY EMERGENCIES  
Chairman: A. ZICHICHI  
55th Session – Co-Chairman: C. GALBIATI  
18 – 24 August 2023
- HYDROGEN SYMPOSIUM  
2nd Session  
Chairmen: C. DI FIGLIO – S.F. ZICHICHI  
22 – 25 August 2023
- INTERNATIONAL SCHOOL OF LIQUID CRYSTALS  
Director: C. ZANNONI  
26th Workshop: *Biophotonics at nanoscale: From smart nanomaterials to advanced optical technologies for life, environmental science and nanomedicine*  
Directors: A. D'ALESSANDRO – P. PASINI – C. ZANNONI  
26 – 31 August 2023
- INTERNATIONAL CONFERENCE ON QUANTUM TECHNOLOGIES SQMS: EARLY RESULTS  
Directors: V. BONVICINI – S. LAMI MOSCHENI  
1 – 7 September 2023
- INTERNATIONAL SCHOOL OF NEUROSCIENCES «SIR JOHN ECCLES»  
Directors: P.F. FERRARI – G. RIZZOLATTI  
13th Course: *Neurobiology of social behaviours*  
Directors: P.F. FERRARI – V. GRINEVICH – F. PAPALEO – S. WAGNER  
8 – 14 September 2023

- INTERNATIONAL SCHOOL OF NUCLEAR PHYSICS  
Directors: A. FAESSLER – now M. BUBALLA – C. FISCHER  
44th Course: *From quarks and gluons to hadrons and nuclei*  
Directors: M. BUBALLA – C. FISCHER  
18 – 24 September 2023
- INTERNATIONAL SCHOOL ON TREASURES OF ART AND SCIENCE  
Director: L. ZICHICHI  
15th Seminar: *Phyto-Taxonomic Investigation of the Mediterranean Area*  
Directors: F.M. RAIMONDO – L. ZICHICHI  
20 – 23 September 2023
- INTERNATIONAL SCHOOL OF QUANTUM ELECTRONICS  
Directors: A.N. CHESTER – D.S. WIERSMA  
67th Course: *Progress in photoacoustic and photothermal phenomena: Focus on biomedical, nanoscale, NDE, gas sensing and thermophysical phenomena and technologies*  
Directors: R. LI VOTI – A. MANDELIS  
24 September – 1 October 2023
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»  
Directors: M. LINDQUIST – P. MINUZ – U. MORETTI  
92nd Workshop: *Ecopharmacovigilance: Impact of pharmaceuticals in the environment*  
Directors: M.R. EDWARDS – M. LINDQUIST – U. MORETTI – G. PAOLONE – R. SORRENTINO  
25 – 28 September 2023
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»  
Directors: M. LINDQUIST – P. MINUZ – U. MORETTI  
93rd Workshop: *Platelets and antiplatelet agents*  
Directors: P. MINUZ – C. PATRONO  
26 – 30 September 2023
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS  
Directors: P. HÄNGGI – F. MARCHESONI  
24th Course: *Quantum technology from fundamental science to real world applications*  
Directors: D. BAJONI – S.L. PORTALUPI – R. TROTTA  
2 – 7 October 2023
- INTERNATIONAL SCHOOL OF SCIENTIFIC JOURNALISM AND COMMUNICATION  
Director: P. CAMPANA  
11th Course: *The big data society*  
Directors: E. COSSI – F. BASSI  
7 – 11 October 2023
- INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA  
Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO  
4th Course: *New Trends in Nonequilibrium Statistical Mechanics*  
Directors: A. CAROLLO – A. LANZARA – M.G. PALMA – B. SPAGNOLO  
9 – 15 October 2023
- INTERNATIONAL SCHOOL OF BIOPHYSICS «ANTONIO BORSELLINO»  
48th Course: *Memos for biophysics into the future: Lightness, quickness, exactitude, visibility, multiplicity, and consistency*  
Directors: M. DALLA SERRA – A. DIASPRO – C. VIAPPIANI  
16 – 22 October 2023
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
Directors: P. PALANZA – S. PARMIGIANI  
52nd Course: *The athletic Ape: Merging human evolutionary biology with sport science*  
Directors: D. LONGMAN – D. PONZI – S. PARMIGIANI  
17 – 21 October 2023
- INTERNATIONAL SCHOOL OF RADIATION DAMAGE AND PROTECTION  
Directors: M. BRUGGER – S. ROESLER – V. VYLET  
12th Course: *Challenges in radiation damage and radiation protection during design and operation of accelerator facilities and space missions*  
Directors: R. GARCIA ALIA – H.-S. LEE – N. MOKHOV  
23 – 30 October 2023

- INTERNATIONAL MEETING ON ORTHOPEDICS  
Director: C. SUGAMELI  
2 – 4 November 2023
  - GIORNATE INTERNAZIONALI DI STUDI SULL'AREA ELIMA «GIUSEPPE NENCI»  
*Decime Giornate Internazionali di Studi sull'Area Elima e la Sicilia Occidentale*  
Directors: C. AMPOLO – R. GIGLIO – A. MAGNETTO  
4 – 20 November 2023
  - INTERNATIONAL SCHOOL ON TREASURES OF ART AND SCIENCE  
Director: L. ZICHICHI  
16th Seminar  
Director: L. ZICHICHI  
4 – 20 November 2023
- 60th ANNIVERSARY OF THE ETTORE MAJORANA FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE  
10 – 12 November 2023
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
Directors: P. PALANZA – S. PARMIGIANI  
53rd Course: *Urban mammals*  
Directors: M. APOLLONIO – S. BERTOLINO – F. FERRETTI – A. MARTINOLI – N. MUCCINO – M. SCANDURA  
20 – 24 November 2023
  - INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D'ALESSANDRO»  
Directors: G.M. FARA – G. GIAMMANCO – C. SIGNORELLI – M. SZKLO – F. VITALE  
60th Course  
Director: G.M. FARA  
20 – 25 November 2023
  - INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA  
Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO  
5th Course: *Chaos and information dynamics in quantum many body systems*  
Directors: D.A. ABANIN – A. POLKOVNIKOV – A. SILVA  
26 November – 2 December 2023
  - INTERNATIONAL SCHOOL OF IUS COMMUNE  
Directors: M. BELLOMO – O. CONDORELLI – W. DECOCK – K. PENNINGTON  
42nd Course: *International law and interfaith relations in the "ius commune" tradition*  
Directors: O. CONDORELLI – W. DECOCK – D. FEDELE  
3 – 7 December 2023
  - INTERNATIONAL SCHOOL OF BRAIN CELLS AND CIRCUITS «CAMILLO GOLGI»  
Directors: E. D'ANGELO – C. GANDINI WHEELER-KINGSHOTT  
8th Course: *Modeling the brain*  
Directors: E. D'ANGELO – C. GANDINI WHEELER-KINGSHOTT  
8 – 13 December 2023

**More information about the activities of the Ettore Majorana Foundation  
can be found on the WWW at the following address:  
<https://ettoremajoranafoundation.it>**